Methane

As there is no MCL for methane, EPA selected a screening level used by the federal Office of Surface Mining (OSM) of 28 parts per million for dissolved methane in drinking water. 28 ppm is the maximum level of methane than can be dissolved in water before the methane leaves solution and enters the air as a gas. Methane is not explosive while in solution and OSM reports that methane in water does not impair the odor, taste or color nor does it affect in anyway the potability of the water. The potential for methane in air to create an explosive environment depends on a number of factors, such as: the concentration, the volume of the space and frequency of air exchanges in the space. Proper room ventilation will ensure that methane levels in indoor air do not present a safety hazard.

When a well is found to have methane levels above 28 ppm, we immediately take action to notify the resident, the state, and the county emergency management agency. This would also trigger a toxicological review and expedite a quality assurance review. EPA found methane above this level in well water at one out of the 11 homes in the first round of samples. This well was not connected to the residence at the time of the sample because the resident was receiving alternate water from Cabot. Nevertheless, EPA has notified that resident, who indicated they were already aware that their water contained levels of methane. EPA also notified Pennsylvania DEP and the Susquehanna County EMA, and can work with local officials to provide recommendations to affected residents in the event that use of well water is resumed. EPA will continue to follow this process should there be any similar instance.

In addition, Pennsylvania does not have a drinking water standard for methane since it is not considered toxic in water. For health and safety reasons, they have established by regulation seven (7) ppm as a gas migration response value. At that level Pennsylvania expects oil and gas well operators to notify the state and work with Pennsylvania to determine what measures may be appropriate to mitigate any threats.